

AMENDMENTS TO THE CLAIMS

Claims 1-4 (canceled).

5. (new) A method for processing a digital image comprising the steps of:
identifying first and second sets of pixels corresponding respectively to
first and second regions of the image;
identifying a third set of pixels corresponding to a third region of the
image at the boundary between the first and second regions;
determining a contribution factor for a candidate pixel in the third set of
pixels representing the contribution to the visual characteristics of the first
and second regions, in which the contribution factor is determined using
the visual characteristics of the candidate pixel and the visual
characteristics of pixels in the neighborhood of the candidate pixel
belonging to the first and second sets of pixels.
6. (new) The method of claim 5 in which the pixels in the neighborhood of the candidate
pixel comprise those pixels that are within a certain distance from the candidate
pixel.
7. (new) The method of claim 6 in which the distances may be varied.
8. (new) The method of claim 5 in which the visual characteristics of each pixel are
representable by a set of values, and in which the contribution factor is
determined from first, second and third sets of values, the first set of values being
derived from the sets of values representing the visual characteristics of pixels in
the neighborhood of the candidate pixel belonging to the first set of pixels, the
second set of values being derived from the sets of values representing the visual
characteristics of pixels in the neighborhood of the candidate pixel belonging to
the second set of pixels, and the third set of values being the set of values
representing the visual characteristics of the candidate pixel.

9. (new) The method of claim 8 in which the first set of values is the average of the sets of values representing the visual characteristics of the pixels in the neighborhood of the candidate pixel belonging to the first set of pixels.
10. (new) The method of claim 8 in which the second set of values is the average of the sets of values representing the visual characteristics of the pixels in the neighborhood of the candidate pixel belonging to the second set of pixels.
11. (new) The method of claim 8 comprising the further step of determining a set of classes of visual characteristics which occur only in the first region of the image and which occur in regions of the image which are adjacent to the third region of the image, in which the first set of values is the set of values representing the modal visual characteristics of a selected class of visual characteristics.
- 12 (new) The method of claim 8 comprising the further step of determining a set of classes of visual characteristics which occur only in the second region of the image and which occur in regions of the image which are adjacent to the third region of the image, in which the second set of values is the set of values representing the modal visual characteristics of a selected class of visual characteristics.
13. (new) The method of claim 11 or 12 in which the selected class of visual characteristics is that which minimizes the quantity d , where
- $$d = \frac{|(\underline{f} - \underline{b}) \times (\underline{c} - \underline{b})|}{|\underline{f} - \underline{b}|}$$
- where \underline{f} , \underline{b} and \underline{c} are the vectors whose components are respectively the first, second and third sets of values.
- 14 (new) The method of claim 8 in which the contribution factor is given by the equation

$$\alpha = \frac{(\underline{c} - \underline{b}) \cdot (\underline{f} - \underline{b})}{|(\underline{f} - \underline{b})|^2}$$

where α is the contribution factor and \underline{f} , \underline{b} and \underline{c} are the vectors whose components are respectively the first, second and third sets of values.

15. (new) The method of claim 5 in which the contribution factor is an opacity factor.
16. (new) The method of claim 5 in which the visual characteristics include color.
17. (new) The method of claim 5 in which the first region of the image is a foreground portion of the image and the second region of the image is a background portion of the image.
18. (new) The method of claim 5 comprising the further steps of:
modifying the visual characteristics of the third set of pixels according to the contribution factor; and
overlaying the first and third sets of pixels onto a second digital image, the visual characteristics of the overlaid pixels corresponding to the first set of pixels being the same as the visual characteristics of the first set of pixels, the visual characteristics of the overlaid pixel corresponding to the third set of pixels being derived from the contribution factor, the visual characteristics of the pixels onto which the third set of pixels were overlaid and the visual characteristics of the third set of pixels.
19. (new) A system for processing a digital image arranged to undertake the method of claim 5.
20. (new) A method of digital image processing in which an object is excised from a first digitized image and pasted on to a second digitized image, the method including the steps of
identifying a set of pixels corresponding to the object, and within that set which pixels correspond to the edge(s) of the object and which to the interior,

for each pixel corresponding to the edge(s) of the object assigning a contribution factor dependent upon the parameters associated with its immediate neighbors including other edge pixels, pixels corresponding to the interior of the object and peripheral background pixels corresponding to the parts of the first digitized image which lie outside the excised object but adjacent its edge(s), substituting for the parameters associated with each edge pixel of the set parameters based on the contribution factor and on the parameters associated with the peripheral background pixels of the second digitized image, and constructing a new digitized image file from the pixels of the second digitized image not located at positions corresponding to the pixels of the excised object, the pixels of the interior of the object, and the edge pixels with substituted parameters.

21. (new) A method according to claim 20 wherein the contribution factor is calculated by a method including locating in color space a first point corresponding to the color of pixels adjacent or near the respective edge pixel and assigned to the set of interior pixels,
a second point corresponding to the color of pixels adjacent or near the respective edge pixel and being peripheral background pixels,
and calculating the contribution factor dependent upon the position along the line of the point on the line in color space connecting the first point and the second point closest to the point in color space corresponding to the edge pixel for which the contribution factor is to be calculated.
22. (new) A method according to claim 21 where the contribution factors for the edge pixels are first calculated for all edge pixels in respect of which the surrounding eight pixels include both interior pixels and peripheral background pixels, thereafter for those of the remaining edge pixels in respect of which the surrounding 24 pixels include both interior pixels and peripheral background pixels, and, in respect of any still incalculable pixels; taking into account a great number of pixels surrounding the respective edge pixel.